

What is claimed is:

1. A method of simulating operation of a production system comprising a first set of at least one tool controlled by a second set of at least one tool, the method comprising:

receiving a quantity of time during which the second set of at least one tool is not able to control the first set of at least one tool; and

calculating at least one production quantity affected by the first set of at least one tool responsive to the quantity of time received..

2. The method of claim 1 wherein the quantity of time received is a quantity of time at least one of the tools in the second set is not operational.

3. The method of claim 1 wherein at least one of the tools in the first set comprises a production processing tool.

4. The method of claim 1 wherein the quantity of time comprises a percentage.

5. The method of claim 1 wherein the production quantity comprises a throughput.

6. The method of claim 1 wherein the production quantity comprises a good unit equivalents produced per unit of time.

7. The method of claim 1 wherein:

the production process comprises a plurality of sets of at least one tool, comprising the first set and the second set and a third set; and

the production quantity is additionally calculated responsive to a quantity related to the third set of at least one tool.

8. The method of claim 7 wherein the production quantity comprises at least one selected from:

a number of products provided to at least one of the plurality of sets of at least one tool; and

a number of products provided by at least one of the plurality of sets of at least one tool.

9. The method of claim 7 wherein the production quantity comprises:

a number of products provided to at least one of the plurality of sets of at least one tool; and

a number of products provided by at least one of the plurality of sets of at least one tool.

10. The method of claim 7 wherein the production quantity comprises an amount of time at least one of the plurality of sets of at least one tool takes to process a unit produced by said at least one tool.

11. The method of claim 7 wherein the production quantity comprises an average amount of time at least one tool in at least one of the plurality of sets takes to process a unit produced by said at least one tool in the set.

12. The method of claim 7 wherein the production quantity comprises a number of tools in at least one of the plurality of sets of at least one tool responsive to at least one capacity.

13. The method of claim 7 wherein the production quantity comprises a percent of utilization of the at least one tool in at least one of the plurality of sets.

14. The method of claim 7 wherein the production quantity comprises a number of sets performing a same step in the production system in the plurality of sets.

15. The method of claim 14 wherein each of the number of sets comprises a same number of tools.

16. A computer program product comprising a computer useable medium having computer readable program code embodied therein for simulating operation of a production system comprising a first set of at least one tool controlled by a second set of at least one tool, the computer program product comprising computer readable program code devices configured to cause a computer to:

receive a quantity of time during which the second set of at least one tool is not able to control the first set of at least one tool; and

calculate at least one production quantity affected by the first set of at least one tool responsive to the quantity of time received.

17. The computer program product of claim 16 wherein the quantity of time received is a quantity of time at least one of the tools in the second set is not operational.

18. The computer program product of claim 16 wherein at least one of the tools in the first set comprises a production processing tool.

19. The computer program product of claim 16 wherein the quantity of time comprises a percentage.

20. The computer program product of claim 16 wherein the production quantity comprises a throughput.

21. The computer program product of claim 16 wherein the production quantity comprises a good unit equivalents produced per unit of time.

22. The computer program product of claim 16 wherein:
the production process comprises a plurality of sets of at least one tool, comprising the first set and the second set and a third set; and

the production quantity is additionally calculated responsive to a quantity related to the third set of at least one tool.

23. The computer program product of claim 22 wherein the production quantity comprises at least one selected from:

a number of products provided to at least one of the plurality of sets of at least one tool; and

a number of products provided by at least one of the plurality of sets of at least one tool.

24. The computer program product of claim 22 wherein the production quantity comprises:

a number of products provided to at least one of the plurality of sets of at least one tool; and

a number of products provided by at least one of the plurality of sets of at least one tool.

25. The computer program product of claim 22 wherein the production quantity comprises an amount of time at least one of the plurality of sets of at least one tool takes to process a unit produced by said at least one tool.

26. The computer program product of claim 22 wherein the production quantity comprises an average amount of time at least one tool in at least one of the plurality of sets

takes to process a unit produced by said at least one tool in the set.

27. The computer program product of claim 22 wherein the production quantity comprises a number of tools in at least one of the plurality of sets of at least one tool responsive to at least one capacity.

28. The computer program product of claim 22 wherein the production quantity comprises a percent of utilization of the at least one tool in at least one of the plurality of sets.

29. The computer program product of claim 22 wherein the production quantity comprises a number of sets performing a same step in the production system in the plurality of sets.

30. The computer program product of claim 29 wherein each of the number of sets comprises a same number of tools.

31. An apparatus of simulating operation of a production system comprising a first set of at least one tool controlled by a second set of at least one tool, the apparatus comprising:

a tool parameter manager having at least one input for receiving a quantity of time during which the second set of at least one tool is not able to control the first set of at least one tool; and

a production quantity calculator coupled to the tool parameter manager for calculating and providing at an output at least one production quantity affected by the first set of at least one tool responsive to the quantity of time received.

32. The apparatus of claim 31 wherein the quantity of time received is a quantity of time at least one of the tools in the second set is not operational.

33. The apparatus of claim 31 wherein at least one of the tools in the first set comprises a production processing tool.

34. The apparatus of claim 31 wherein the quantity of time comprises a percentage.

35. The apparatus of claim 31 wherein:

the production quantity calculator comprises a group throughput calculator; and

the production quantity comprises a throughput.

36. The apparatus of claim 31 wherein:

the production quantity calculator comprises a group good units calculator; and

the production quantity comprises a good unit equivalents produced per unit of time.

37. The apparatus of claim 31 wherein:

the production process comprises a plurality of sets of at least one tool, comprising the first set and the second set and a third set; and

the production quantity is additionally calculated responsive to a quantity related to the third set of at least one tool.

38. The apparatus of claim 37 wherein:

the production quantity calculator comprises a simulator;

and the production quantity comprises at least one selected from:

a number of products provided to at least one of the plurality of sets of at least one tool; and

a number of products provided by at least one of the plurality of sets of at least one tool.

39. The apparatus of claim 37 wherein:

the production quantity calculator comprises a simulator;

and the production quantity comprises:

a number of products provided to at least one of the plurality of sets of at least one tool; and

a number of products provided by at least one of the plurality of sets of at least one tool.

40. The apparatus of claim 37 wherein:

the production quantity calculator comprises a step process time calculator; and

the production quantity comprises an amount of time at least one of the plurality of sets of at least one tool takes to process a unit produced by said at least one tool.

41. The apparatus of claim 37 wherein:

the production quantity calculator comprises a process time rate and units calculator; and

the production quantity comprises an average amount of time at least one tool in at least one of the plurality of sets takes to process a unit produced by said at least one tool in the set.

42. The apparatus of claim 37 wherein:

the production quantity calculator comprises a tools requirements calculator; and

the production quantity comprises a number of tools in at least one of the plurality of sets of at least one tool responsive to at least one capacity.

43. The apparatus of claim 37 wherein:

the production quantity calculator comprises a utilization calculator; and

the production quantity comprises a percent of utilization of the at least one tool in at least one of the plurality of sets.

44. The apparatus of claim 37 wherein:

the production quantity calculator comprises a number of cells/tools calculator; and

the production quantity comprises a number of sets performing a same step in the production system in the plurality of sets.

45. The apparatus of claim 44 wherein each of the number of sets comprises a same number of tools.